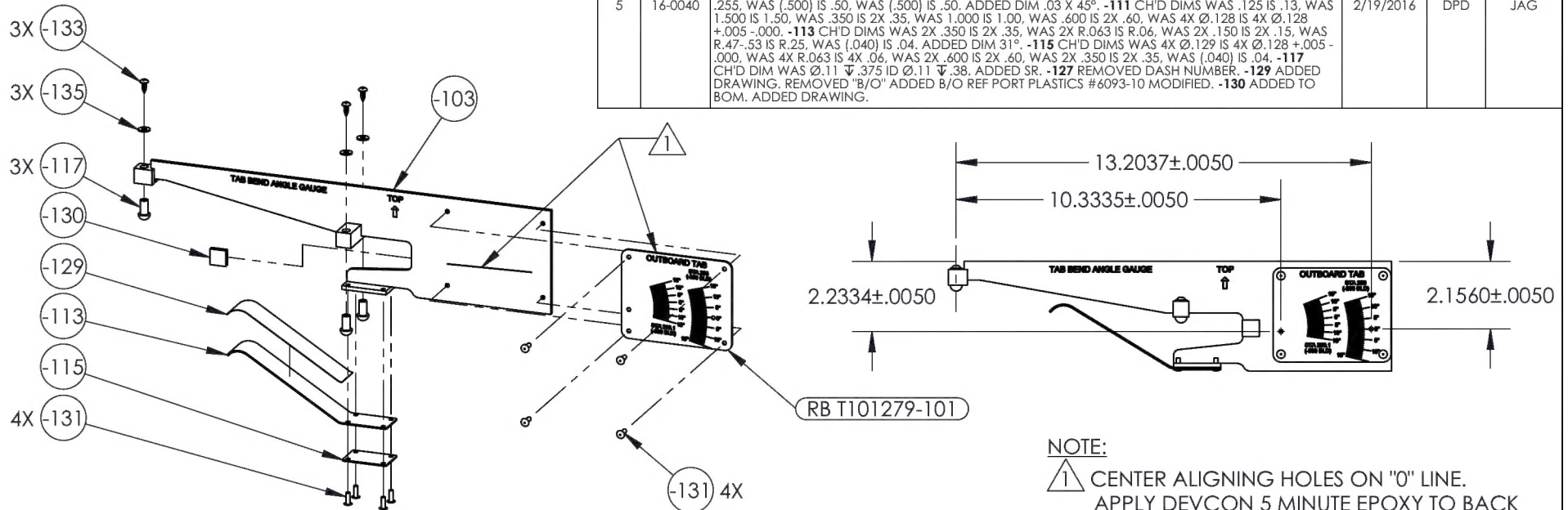


This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		CH'D -105 THRU HOLES FROM Ø.125 TO .128, CH'D HOLE POSITION FROM .256 TO .266 & 3.26 TO 3.25 PER G.E.	3/14/2012	RJC	GE
2		CH'D -105 ENGRAVE NOTE TO MACHINE ENGRAVE & CH'D T/N FROM RB T101656.	3/26/2012	RJC	RW
3		-103 ADDED REF DIM (.258). -105 CH'D DIM WAS Ø.128 THRU (x4) IS Ø.128 +.005/-0.000 THRU (4X).	2/13/2013	BIM	SE
4		-109 CH'D SLOT DIM WAS .13-.14 LIMITS IS .125 +.005 -0.000. CH'D THRU HOLE WAS Ø.256-.262 TO Ø.255-.252. -113 & -115 MAT'L CHANGED WAS 301 S.S. IS 301 S.S. 1/2 HARD ROCKWELL 32. -117 CH'D DIAMETER WAS Ø.23-.24 IS Ø.245-.250.	1/21/2014	DPD	GE
5	16-0040	UPDATED TO NEW STANDARDS. ADDED OEM REF NUMBER. -103 DELETED DIMS .92-.96, .17-.21, 1.47-1.53. CH'D DIM WAS .97-1.03 IS (1.000). ADDED WELD CALLOUTS FOR -109. -105 CH'D DIMS WAS (.125) IS .13 +.00 -.01, WAS 2X 2.50 IS 2X 2.500. WAS 2X 3.25 IS 2X 3.250. CH'D ENGRAVE NOTE WAS MACHINE ENGRAVE TEXT HT.188, S/N, "MADE IN USA" IS MACHINE ENGRAVE TEXT HT.188. ADDED NOTE ENGRAVE T/N, S/N, "MADE IN USA". -107 CH'D DIMS WAS 2X Ø.256-.262 ✓ Ø.30 X 100° IS Ø.252-.255, WAS .13-.14 IS .135 +.010 -0.000, WAS (.500) IS .50. ADDED DIM .03 X 45°. -109 CH'D DIMS WAS .125 +.005 -0.000 IS .135 +.010 -0.000, WAS Ø.252-.255 ✓ Ø.38 X 100° BOTH SIDES IS Ø.252-.255, WAS (.500) IS .50, WAS (.500) IS .50. ADDED DIM .03 X 45°. -111 CH'D DIMS WAS .125 IS .13, WAS 1.500 IS 1.50, WAS .350 IS 2X .35, WAS 1.000 IS 1.00, WAS .600 IS 2X .60, WAS 4X Ø.128 IS 4X Ø.128 +.005 -0.000. -113 CH'D DIMS WAS 2X .350 IS 2X .35, WAS 2X R.063 IS R.06, WAS 2X .150 IS 2X .15, WAS R.47-.53 IS R.25, WAS (.040) IS .04. ADDED DIM 31°. -115 CH'D DIMS WAS 4X Ø.129 IS 4X Ø.128 +.005 -0.000, WAS 4X R.063 IS 4X .06, WAS 2X .600 IS 2X .60, WAS 2X .350 IS 2X .35, WAS (.040) IS .04. -117 CH'D DIM WAS Ø.11 ✓ .375 ID Ø.11 ✓ .38. ADDED SR. -127 REMOVED DASH NUMBER. -129 ADDED DRAWING. REMOVED "B/O" ADDED B/O REF PORT PLASTICS #6093-10 MODIFIED. -130 ADDED TO BOM. ADDED DRAWING.	2/19/2016	DPD	JAG



NOTE:

- 1 CENTER ALIGNING HOLES ON "0" LINE. APPLY DEVCON 5 MINUTE EPOXY TO BACK OF RB T101279-101 BEFORE ATTACHING.
2. REF. BELL T/N: T101656-145.

ASSY QTY	ASSY QTY	B/O	Part #	UNIT QTY	Description	Material	B/O INFORMATION OR SPECIFICATIONS	PG.
				1	ANGLE PLATE		RB T101279-101	1
	X		-103	1	FRAME WELDMENT			2
	1		-105		FRAME	6061		3
	1		-107		ADAPTER	6061		4
	1		-109		ADAPTER	6061		5
	1		-111		PAD	6061		6
			-113	1	SPRING	301 S.S. 1/2 HARD RC 32		7
			-115	1	RETAINER	301 S.S. 1/2 HARD RC 32		8
			-117	3	BUMPER	BLACK DELRIN		9
			-129	1	TAPE	TEFLON	(PORT PLASTICS #6093-10) MODIFIED	10
			-130	1	TAPE	TEFLON	(PORT PLASTICS #6093-10) MODIFIED	11
		B/O	-131	8	RIVET	ALUMINUM	Ø1/8 X 3/8 (AN470AD-4-6)	1
		B/O	-133	3	SELF THREADING PAN HEAD SCREW	S.S.	6-32 X 3/8 (MCMaster-CARR #90184A127)	1
		B/O	-135	3	FLAT WASHER	S.S.	#6 (MCMaster-CARR #98017A615)	1
	ASSY -103							

GAGE ASSY. - BEND ANGLE, TRIM TAB, 412 MRB

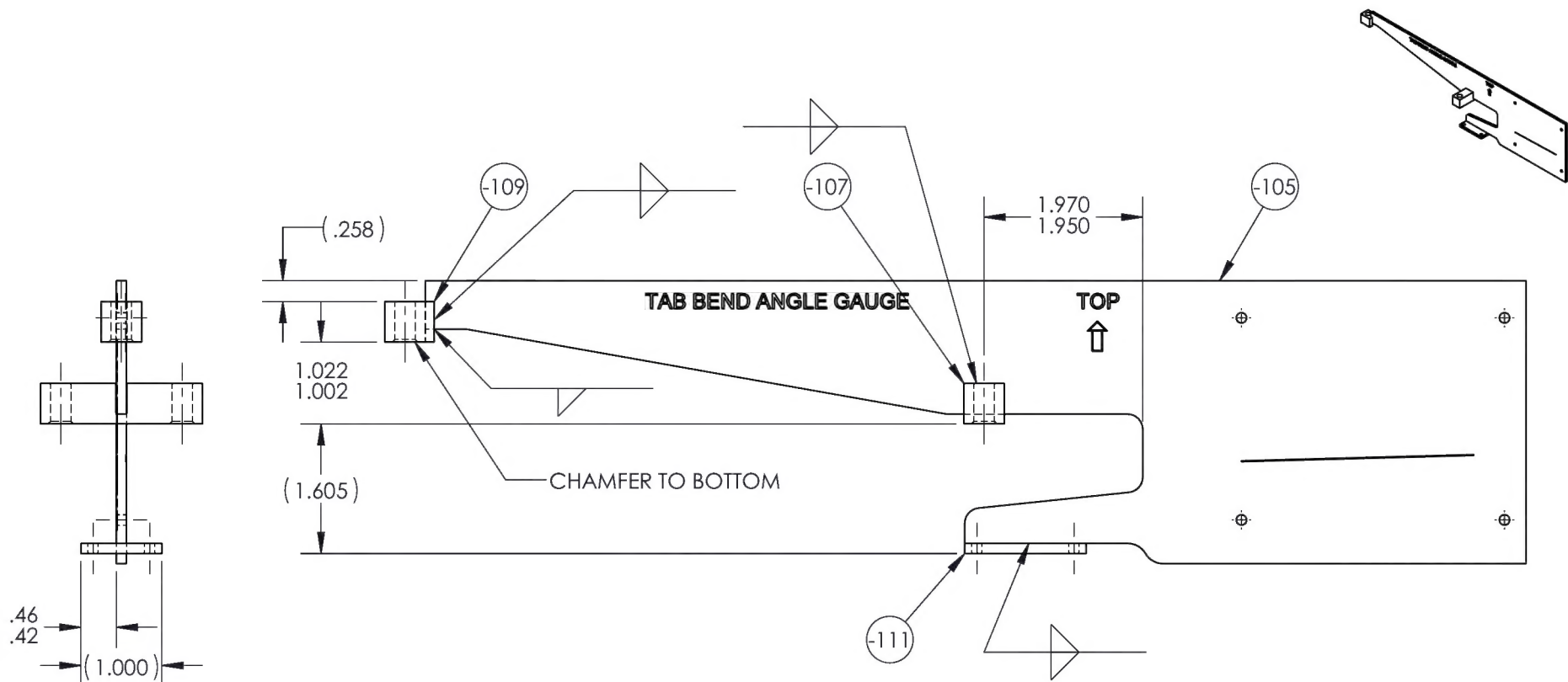
RB T101656-145

REV 5

DWG NO.		REV 5	
MAT'L		UNLESS OTHERWISE SPECIFIED	
HEAT TREAT		DIMENSIONS ARE IN INCHES	
FINISH		.XXX ± .005 FRACTIONS ± 1/8	
SPEC		.XX ± .01 ANGLES ± 5°	
DRAWN BY: CLOUGH		.X ± .1 SURFACES = 125✓	
CHECKED: CLOUGH		1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
OPPS APPR: ANDERSON		2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
QA APPR: LINDSAY		3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
APPROVED: GILBERT		USED ON MODEL	
SCALE 1:5		DATE 2/2/2012	
		SHEET 1 OF 11	

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
3		-103 ADDED REF DIM (.258).	2/13/2013	BIM	SE
5	16-0040	-103 DELETED DIMS .92-.96, .17-.21, 1.47-1.53. CH'D DIM WAS .97-1.03 IS (1.000). ADDED WELD CALLOUTS FOR -109. ADDED NOTE CHAMFER TO BOTTOM.	2/19/2016	DPD	JAG



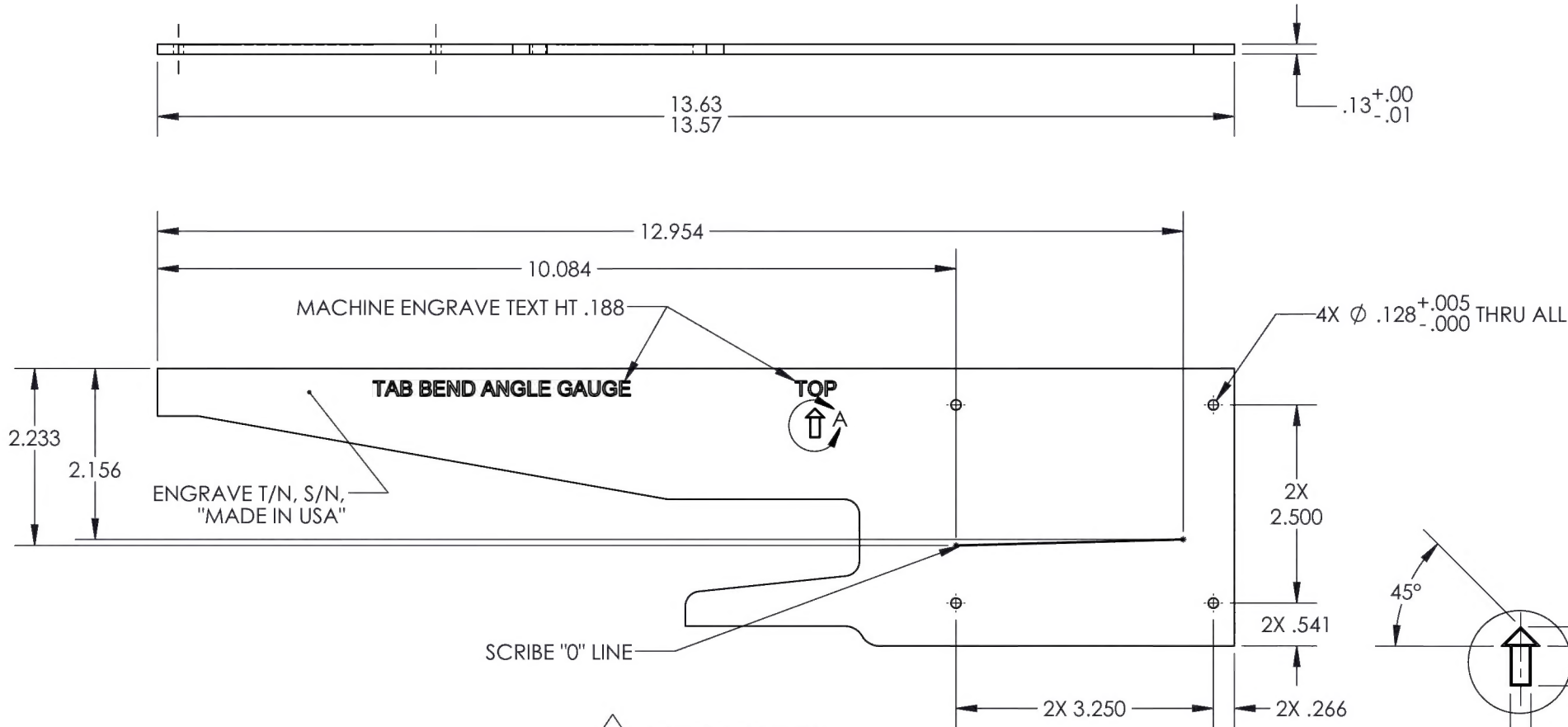
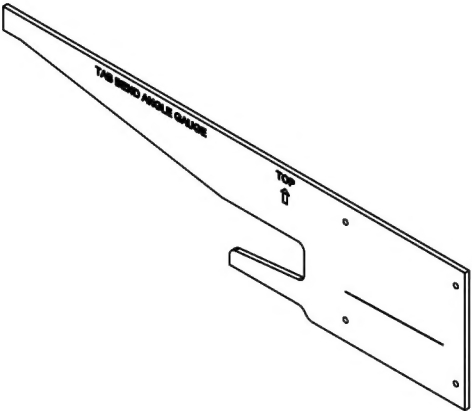
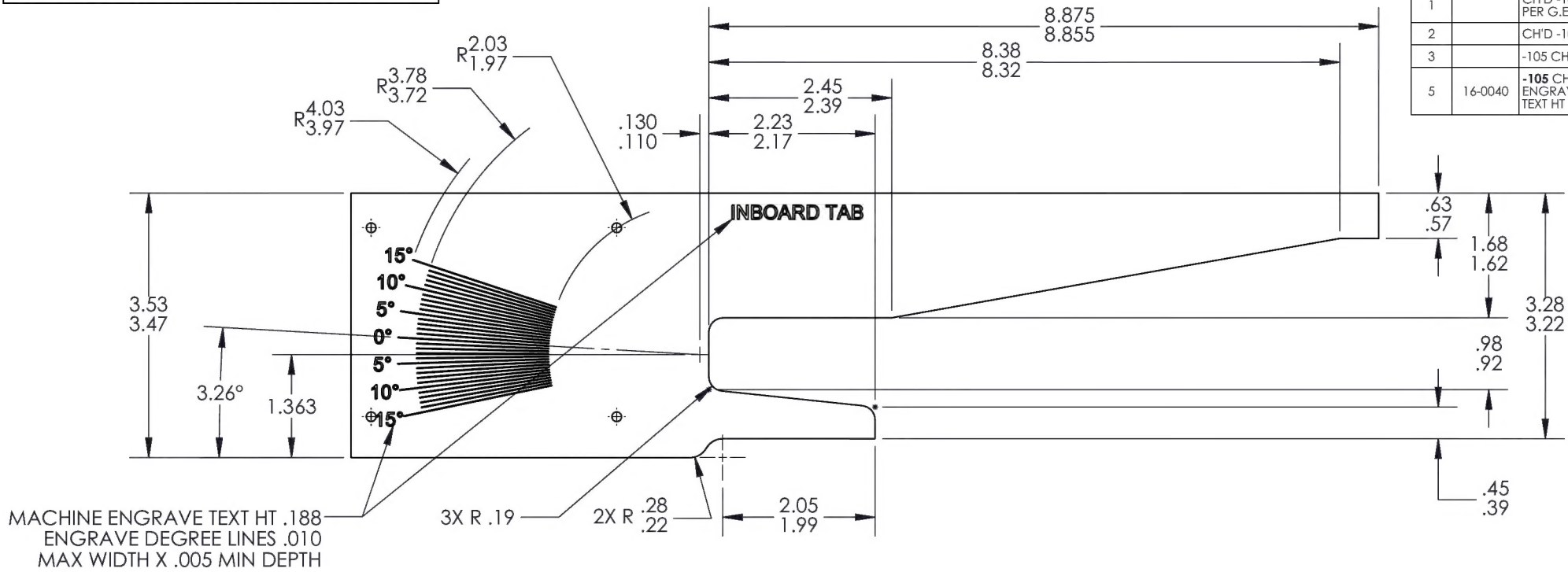
-103

FRAME WELDMENT

DART AEROSPACE	
TITLE GAGE ASSY. - BEND ANGLE, TRIM TAB, 412 MRB	
DWG NO. RB T101656-145-103	REV 5
MAT'L	UNLESS OTHERWISE SPECIFIED
HEAT TREAT	DIMENSIONS ARE IN INCHES
FINISH RED ANODIZE	.XXX ± .005 FRACTIONS ± 1/8
SPEC MIL-A-8625, TYPE II, CLASS II	.XX ± .01 ANGLES ± .5°
DRAWN BY: CLOUGH	.X ± .1 SURFACES = 125°
CHECKED: CLOUGH	1. BREAK ALL SHARP EDGES
OPPS APPR: ANDERSON	.015 x 45° OR .015R
QA APPR: LINDSAY	2. DIMENSIONAL LIMITS APPLY
APPROVED: GILBERT	AFTER PLATING
SCALE 1:2	DATE 2/2/2012
	SHEET 2 OF 11

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

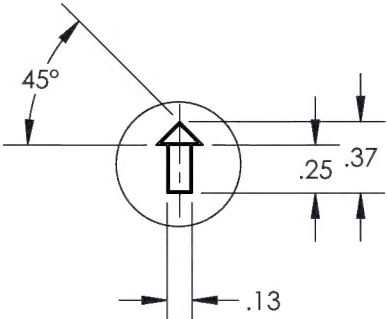
REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
1		CH'D -105 THRU HOLES FROM Ø.125 TO .128, CH'D HOLE POSITION FROM .258 TO .266 & 3.26 TO 3.25	3/14/2012	RJC	GE
2		CH'D -105 ENGRAVE NOTE TO MACHINE ENGRAVE.	3/26/2012	RJC	RW
3		-105 CH'D DIM WAS Ø.128 THRU (x4) IS Ø.128 +.005/-0.000 THRU (4X).	2/13/2013	BIM	SE
5	16-0040	-105 CH'D DIMS WAS (.125) IS .13 +.00 -.01, WAS 2X 2.50 IS 2X 2.500, WAS 2X 3.25 IS 2X 3.250, CH'D ENGRAVE NOTE WAS MACHINE ENGRAVE TEXT HT .188, S/N, "MADE IN USA" IS MACHINE ENGRAVE TEXT HT .188, ADDED NOTE ENGRAVE T/N, S/N, "MADE IN USA".	2/19/2016	DPD	JAG



1 OUTBOARD VIEW

-105

FRAME



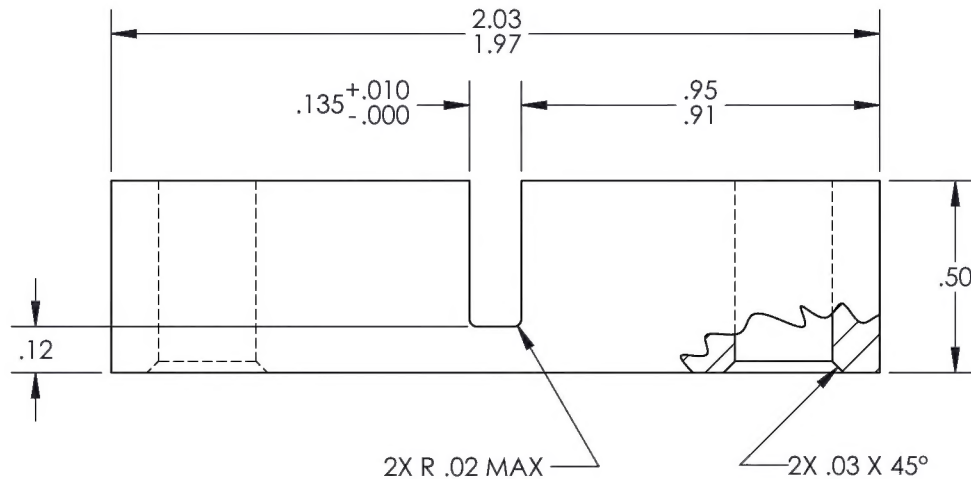
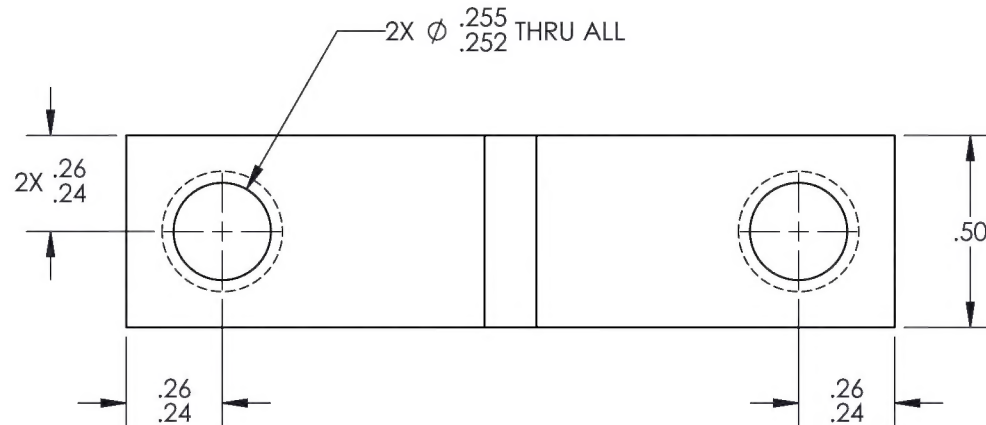
DETAIL A
SCALE 1 : 1

NOTE:
1 OUTBOARD VIEW ROTATED 180° FROM INBOARD VIEW TO SHOW ENGRAVING FOR CLARITY.

DART AEROSPACE			
TITLE GAGE ASSY. - BEND ANGLE, TRIM TAB, 412 MRB			
DWG NO. RB T101656-145-105			REV 5
MAT'L 6061		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
HEAT TREAT		.XXX ± .005 FRACTIONS ± 1/8	
FINISH SEE -103		.XX ± .01 ANGLES ± 5°	
SPEC		.X ± .1 SURFACES = 125/✓	
DRAWN BY: CLOUGH		1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
CHECKED: CLOUGH		2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
OPPS APPR: ANDERSON		3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
QA APPR: LINDSAY		USED ON MODEL	
APPROVED: GILBERT		BELL 412	
SCALE 1:2		DATE 2/2/2012	SHEET 3 OF 11

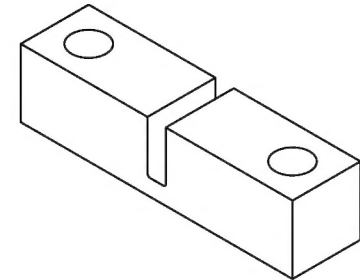
This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
5	16-0040	-107 CH'D DIMS WAS 2X Ø.256-.262 ✓ Ø.30 X 100° IS Ø.252-.255, WAS .13-.14 IS .135 +.010 -.000, WAS (.500) IS .50. ADDED DIM 2X .03 X 45°.	2/19/2016	DPD	JAG



(-107)

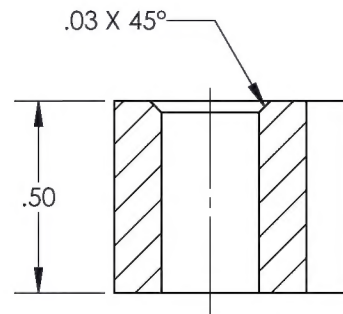
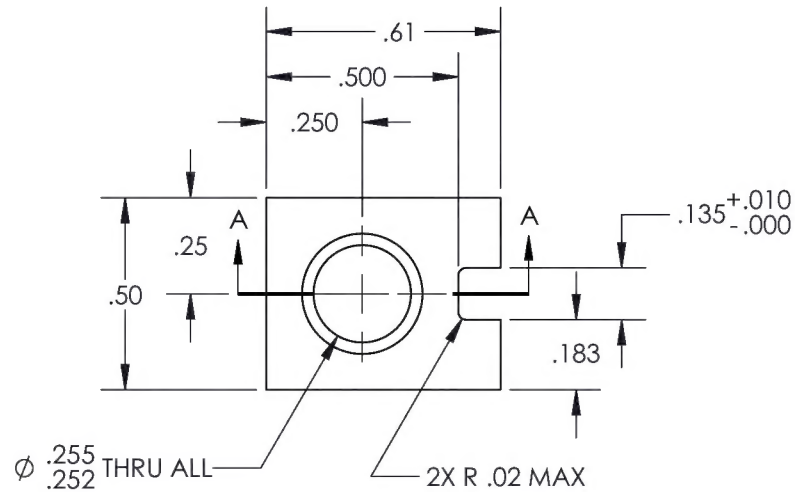
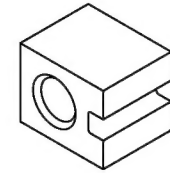
ADAPTER



DART AEROSPACE	
TITLE: GAGE ASSY. - BEND ANGLE, TRIM TAB, 412 MRB	
DWG NO. RB T101656-145-107	REV 5
MAT'L 6061	UNLESS OTHERWISE SPECIFIED
HEAT TREAT	DIMENSIONS ARE IN INCHES
FINISH SEE -103	.XXX ± .005 FRACTIONS ± 1/8
SPEC	.XX ± .01 ANGLES ± .5°
	.X ± .1 SURFACES = 125° ✓
DRAWN BY: CLOUGH	1. BREAK ALL SHARP EDGES
CHECKED: CLOUGH	.015 x 45° OR .015R
OPPS APPR: ANDERSON	2. DIMENSIONAL LIMITS APPLY
QA APPR: LINDSAY	AFTER PLATING
APPROVED: GILBERT	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
SCALE 2:1	DATE 2/2/2012
	SHEET 4 OF 11

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
4		-109 CH'D SLOT DIM WAS .13-.14 LIMITS IS .125 +.005 -.000. CH'D THRU HOLE WAS Ø.256 .262 TO Ø.255-.252.	1/21/2014	DPD	GE
5	16-0040	-109 CH'D DIMS WAS .125 +.005 -.000 IS .135 +.010 -.000, WAS Ø.252-.255 ∇ Ø.38 X 100° BOTH SIDES IS Ø.252-.255, WAS (.500) IS .50, WAS (.500) IS .50. ADDED DIM .03 X 45°.	2/19/2016	DPD	JAG



SECTION A-A

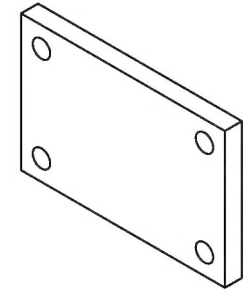
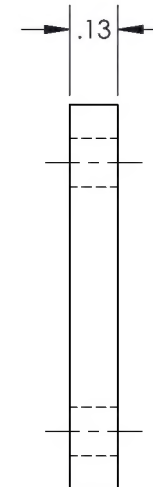
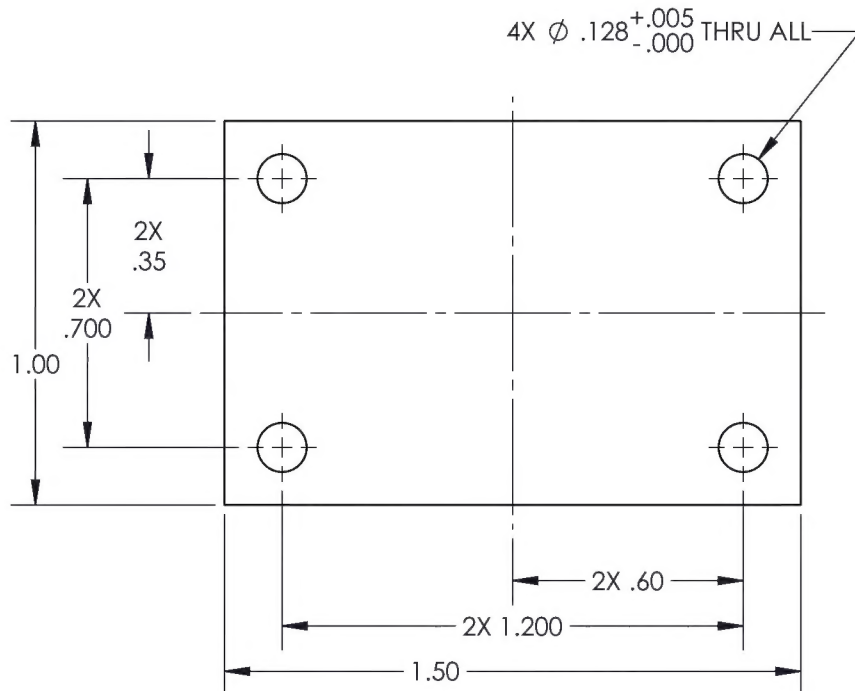
(-109)

ADAPTER

DART AEROSPACE	
TITLE GAGE ASSY. - BEND ANGLE, TRIM TAB, 412 MRB	
DWG NO. RB T101656-145-109	REV 5
MAT'L 6061	UNLESS OTHERWISE SPECIFIED
HEAT TREAT	DIMENSIONS ARE IN INCHES
FINISH SEE -103	.XXX ± .005 FRACTIONS ± 1/8
SPEC	.XX ± .01 ANGLES ± 5°
	.X ± .1 SURFACES = 125°
DRAWN BY: CLOUGH	1. BREAK ALL SHARP EDGES
CHECKED: CLOUGH	.015 x 45° OR .015R
OPPS APPR: ANDERSON	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
QA APPR: LINDSAY	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
APPROVED: GILBERT	USED ON MODEL
	BELL 412
SCALE 2:1	DATE 2/2/2012
	SHEET 5 OF 11

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
5	16-0040	-111 CH'D DIMS WAS .125 IS .13, WAS 1.500 IS 1.50, WAS .350 IS 2X .35, WAS 1.000 IS 1.00, WAS .600 IS 2X .60, WAS 4X Ø.128 IS 4X Ø.128 +.005 -.000.	2/19/2016	DPD	JAG

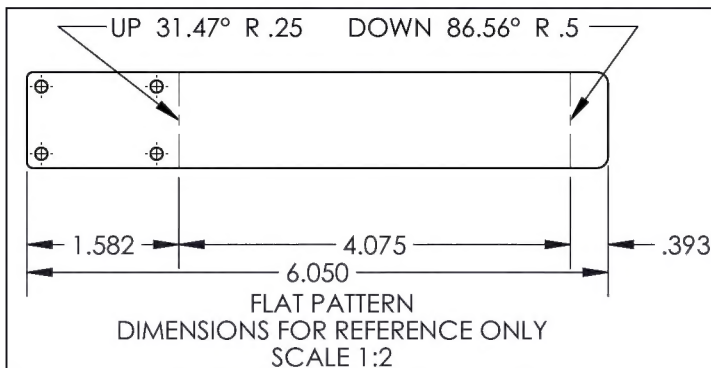
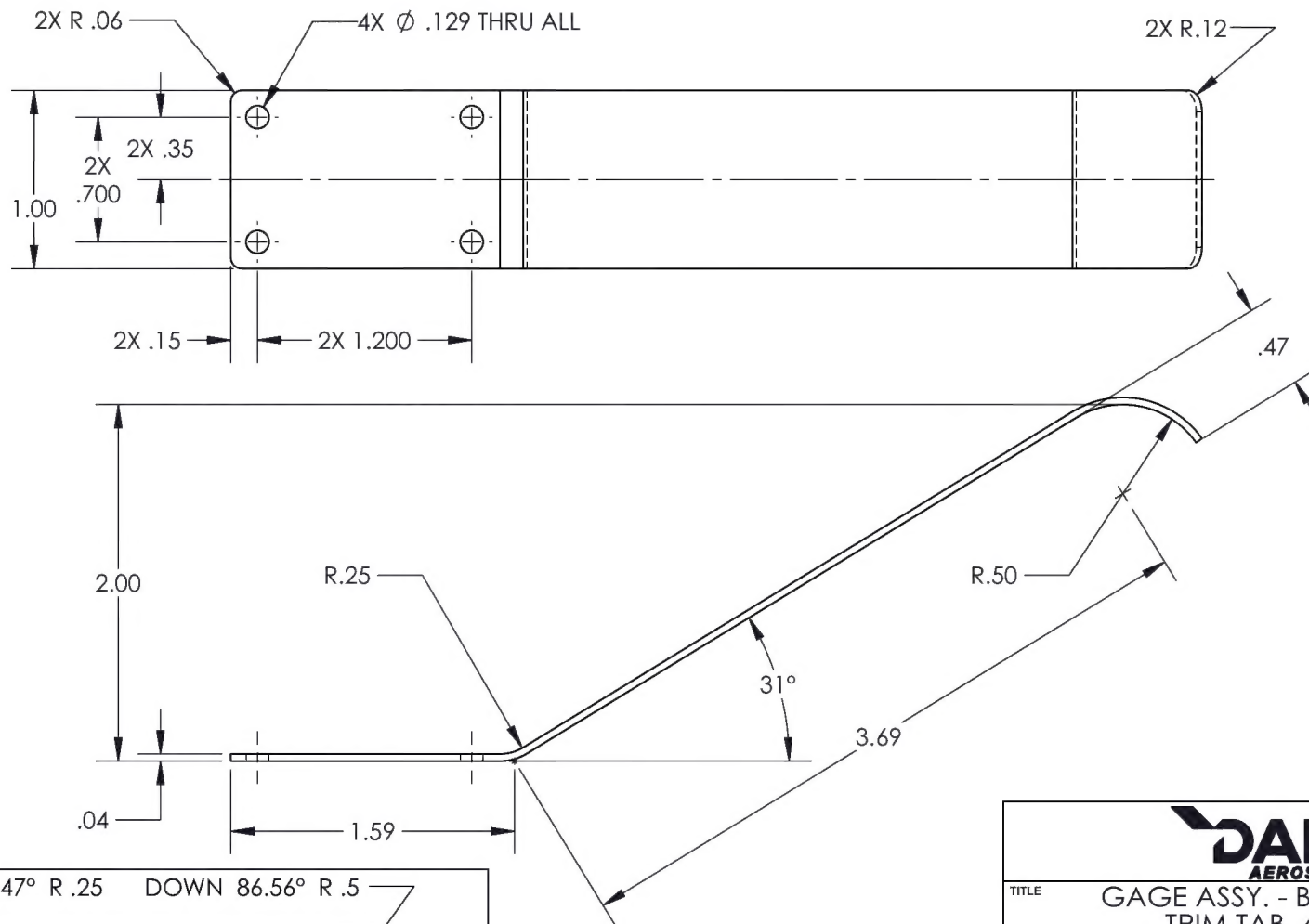


(-111)
PAD

DART AEROSPACE	
TITLE GAGE ASSY. - BEND ANGLE, TRIM TAB, 412 MRB	
DWG NO. RB T101656-145-111	REV 5
MAT'L 6061	UNLESS OTHERWISE SPECIFIED
HEAT TREAT	DIMENSIONS ARE IN INCHES
FINISH SEE -103	.XXX ± .005 FRACTIONS ± 1/8
SPEC	.XX ± .01 ANGLES ± .5°
DRAWN BY: CLOUGH	.X ± .1 SURFACES = 125° ✓
CHECKED: CLOUGH	1. BREAK ALL SHARP EDGES
OPPS APPR: ANDERSON	.015 x 45° OR .015R
QA APPR: LINDSAY	2. DIMENSIONAL LIMITS APPLY
APPROVED: GILBERT	AFTER PLATING
SCALE 2:1	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
DATE 2/2/2012	USED ON MODEL
SHEET 6 OF 11	BELL 412

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
4		-113 MAT'L CHANGED WAS 301 S.S. IS 301 S.S. 1/2 HARD ROCKWELL 32	1/21/2014	DPD	GE
5	16-0040	-113 CH'D DIMS WAS 2X .350 IS 2X .35, WAS 2X R.063 IS R.06, WAS 2X .150 IS 2X .15, WAS R.47-.53 IS R.25, WAS (.040) IS .04. ADDED DIM 31°.	2/19/2016	DPD	JAG



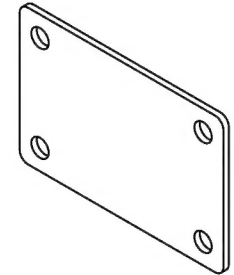
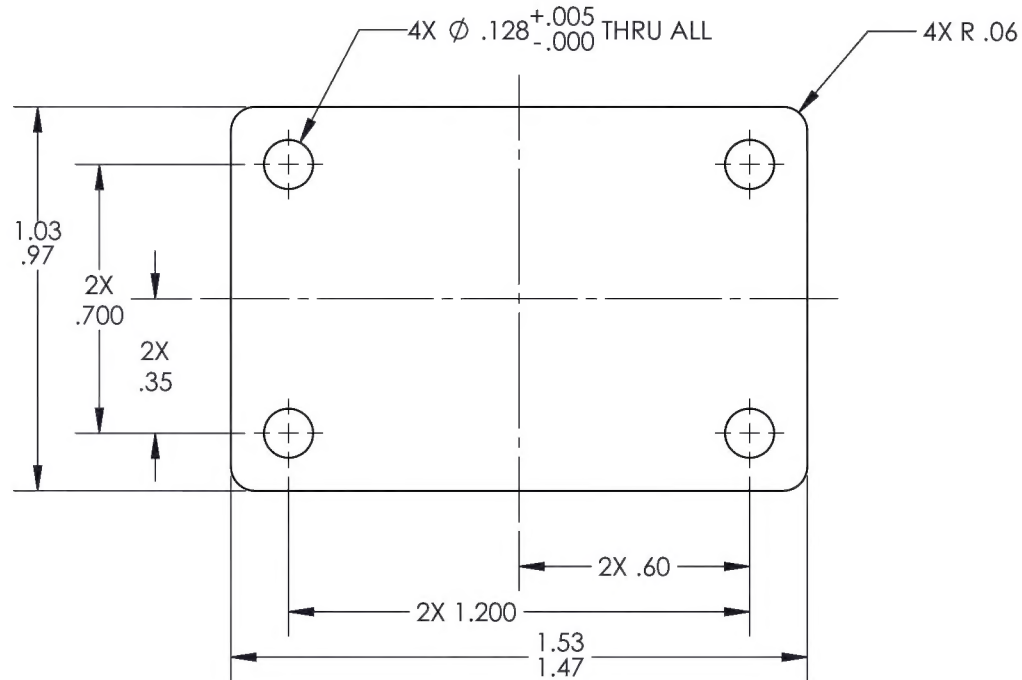
(-113)

SPRING

DART AEROSPACE	
TITLE GAGE ASSY. - BEND ANGLE, TRIM TAB, 412 MRB	
DWG NO. RB T101656-145-113	REV 5
MAT'L 301 S.S. 1/2 HARD RC 32	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
.XXX ± .010 FRACTIONS ± 1/8	
.XX ± .03 ANGLES ± 1°	
.X ± .1 SURFACES = 125°	
SPEC 1. BREAK ALL SHARP EDGES .015 x 45° OR .015R	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009	
DRAWN BY: CLOUGH	USED ON MODEL
CHECKED: CLOUGH	BELL 412
OPPS APPR: ANDERSON	
QA APPR: LINDSAY	
APPROVED: GILBERT	
SCALE 1:1	DATE 2/2/2012
SHEET 7 OF 11	

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
4		-115 MAT'L CHANGED WAS 301 S.S. IS 301 S.S. 1/2 HARD ROCKWELL 32.	1/21/2014	DPD	GE
5	16-0040	-115 CH'D DIMS WAS 4X Ø.129 IS 4X Ø.128 +.005 -.000, WAS 4X R.063 IS 4X .06, WAS 2X .600 IS 2X .60, WAS 2X .350 IS 2X .35, WAS (.040) IS .04.	2/19/2016	DPD	JAG

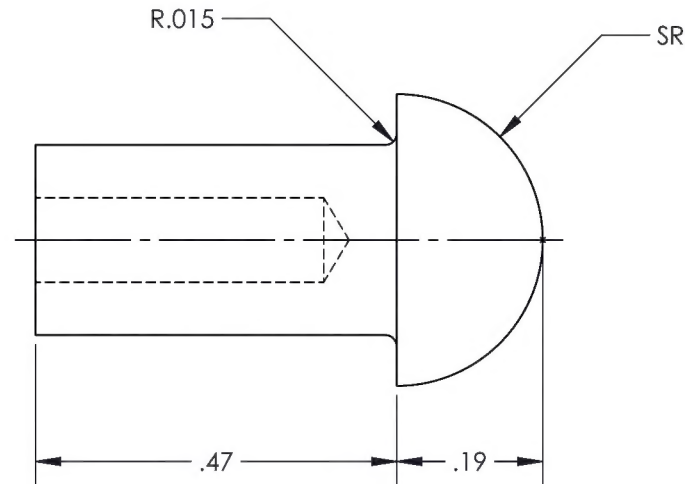
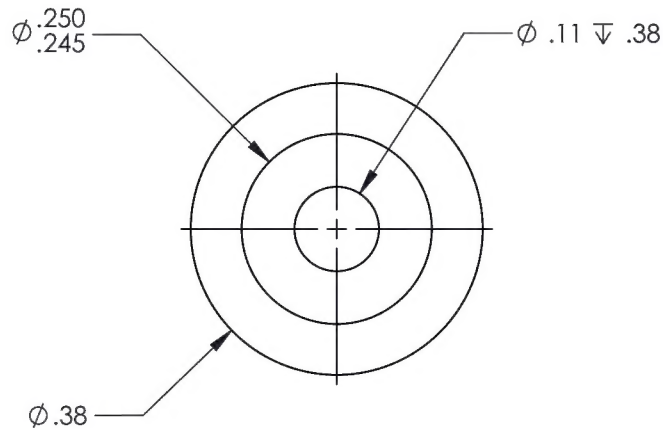
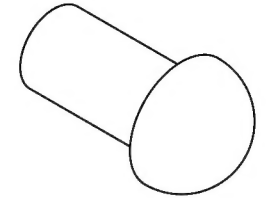


(-115)
RETAINER

DART AEROSPACE	
TITLE GAGE ASSY. - BEND ANGLE, TRIM TAB, 412 MRB	
DWG NO. RB T101656-145-115	REV 5
MAT'L 301 S.S. 1/2 HARD RC 32	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
HEAT TREAT	.XXX ± .005 FRACTIONS ± 1/8
FINISH	.XX ± .01 ANGLES ± .5°
SPEC	.X ± .1 SURFACES = 125° ✓
DRAWN BY: CLOUGH	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
CHECKED: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
OPPS APPR: ANDERSON	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	BELL 412
SCALE 2:1	DATE 2/2/2012 SHEET 8 OF 11

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
4		-117 CH'D DIAMETER WAS .23-.25 IS Ø.245-.250.	1/21/2014	DPD	GE
5	16-0040	-117 CH'D DIM WAS Ø.11 ∇ .38. ADDED SR.	2/19/2016	DPD	JAG



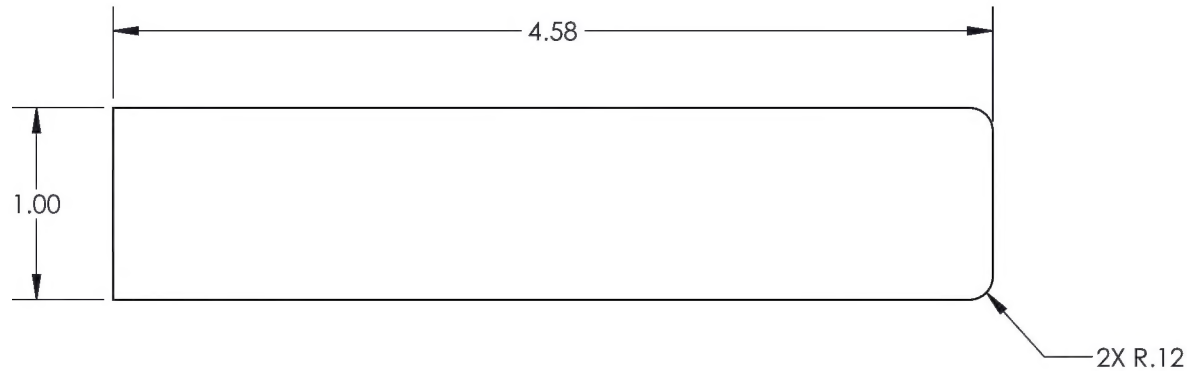
(-117)

BUMPER

DART AEROSPACE	
TITLE GAGE ASSY. - BEND ANGLE, TRIM TAB, 412 MRB	
DWG NO. RB T101656-145-117	REV 5
MAT'L BLACK DELRIN	UNLESS OTHERWISE SPECIFIED
TREAT	DIMENSIONS ARE IN INCHES
FINISH	.XXX \pm .005 FRACTIONS \pm 1/8
SPEC	.XX \pm .01 ANGLES \pm .5°
	.X \pm .1 SURFACES = 125° ✓
DRAWN BY: CLOUGH	1. BREAK ALL SHARP EDGES
CHECKED: CLOUGH	.015 x 45° OR .015R
OPPS APPR: ANDERSON	2. DIMENSIONAL LIMITS APPLY
QA APPR: LINDSAY	AFTER PLATING
APPROVED: GILBERT	3. INTERPRET DIM AND TOL PER
	ASME Y14.5M-2009
SCALE 4:1	DATE 2/2/2012
	SHEET 9 OF 11

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
5	16-0040	-129 ADDED DRAWING.	2/19/2016	DPD	JAG

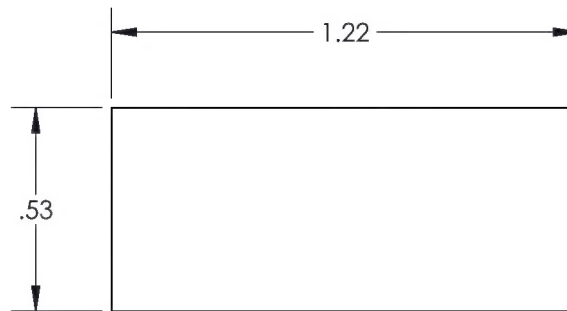
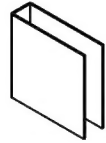


-129
TAPE

DART AEROSPACE	
TITLE GAGE ASSY. - BEND ANGLE, TRIM TAB, 412 MRB	
DWG NO. RB T101656-145-129	REV 5
MAT'L TEFLON	UNLESS OTHERWISE SPECIFIED
HEAT TREAT	DIMENSIONS ARE IN INCHES
FINISH	.XXX ± .010 FRACTIONS ± 1/8
SPEC	.XX ± .03 ANGLES ± 1°
	.X ± .1 SURFACES = 125°
DRAWN BY: CLOUGH	1. BREAK ALL SHARP EDGES
CHECKED: CLOUGH	.015 x 45° OR .015R
OPPS APPR: ANDERSON	2. DIMENSIONAL LIMITS APPLY
QA APPR: LINDSAY	AFTER PLATING
APPROVED: GILBERT	3. INTERPRET DIM AND TOL PER
	ASME Y14.5M-2009
SCALE 1:1	DATE 2/2/2012
	SHEET 10 OF 11

This drawing, specifications, and concepts contained here in are the sole property of Dart Aerospace, and may not be reproduced or used in any fashion without the prior written permission of Dart Aerospace Eugene, OR.

REVISIONS					
REV	ECR	DESCRIPTION	DATE	INITIAL	APPROVED
5	16-0040	-130 ADDED DRAWING.	2/19/2016	DPD	JAG



(-130)

TAPE

DART AEROSPACE	
TITLE GAGE ASSY. - BEND ANGLE, TRIM TAB, 412 MRB	
DWG NO. RB T101656-145-130	REV 5
MAT'L TEFLON	UNLESS OTHERWISE SPECIFIED
HEAT	DIMENSIONS ARE IN INCHES
TREAT	.XXX ± .010 FRACTIONS ± 1/8
FINISH	.XX ± .03 ANGLES ± 1°
	.X ± .1 SURFACES = 125° ✓
SPEC	1. BREAK ALL SHARP EDGES .015 x 45° OR .015R
DRAWN BY: CLOUGH	2. DIMENSIONAL LIMITS APPLY AFTER PLATING
CHECKED: CLOUGH	3. INTERPRET DIM AND TOL PER ASME Y14.5M-2009
OPPS APPR: ANDERSON	
QA APPR: LINDSAY	USED ON MODEL
APPROVED: GILBERT	BELL 412
SCALE 2:1	DATE 2/2/2012 SHEET 11 OF 11